



CONSTRUCTION FENCE -X PEDESTRIAN FLOW DURING CONSTRUCTION

CONSTRUCTION PHASING BOUNDARY — — — — — — —

## SITE PHASING NOTES

## PHASE 1:

INSTALL ALL EROSION CONTROL, PHASE 1 CONSTRUCTION FENCE, AND CONSTRUCTION STAGING MEASURES AND OBTAIN APPROVAL FROM COR. PREPARE SITE FOR GARAGE CONSTRUCTION BY DEMOLISHING CURB, SIDEWALKS, PAVEMENT, UTILITIES, AND ASSOCIATED SITE FEATURES. STABILIZE SITE FOR CONSTRUCTION, CONSTRUCT GARAGE AND ASSOCIATED UTILITY SERVICES. PEDESTRIAN TRAFFIC AT THE NORTHWEST CORNER OF THE LOT 4 GARAGE TO REMAIN THROUGHOUT THE ENTIRE PROJECT. SEE NOTES ON THIS SHEET FOR MAINTENANCE OF TRAFFIC.

COMPLETE ALL PROPOSED WORK IN THIS AREA STARTING WITH PROPOSED UTILITIES AND UTILITY REROUTING. AREAS OUTSIDE THE CONSTRUCTION FENCING FOR PHASE 1 WILL BE DISTURBED IN ORDER TO BORE DRILL CONNECT WATER, ELETRIC, AND SANITARY LINES GOING TO THE PROPOSED GARAGE. PHASE 1 CONSTRUCTION ALSO INCLUDES THE INSTALLATION OF THE SOUTH SIDE EMERGENCY PHONE BETWEEN LOTS 8 AND 9 AND TRENCHING ALONG THE SOUTH SIDE OF LOT 8. ADDITIONAL DEMOLITION, FENCING, SIGNAGE, SAFETY MEASURES AND OTHER RELATED WORK TO BE APPROVED BY THE VA COR AND WILL BE AT NO ADDITIONAL COST TO THE VA.

### PHASE 2:

ONCE PHASE 1 CONSTRUCTION IS COMPLETE AND FULL ACCESS TO THE GARAGE EXISTS, BEGIN PHASE 2 AT DIRECTION OF COR. DEMOLISH PHASE 2 CURB, SIDEWALKS, PAVEMENT, UTILITIES, AND ASSOCIATED SITE FEATURES IN PREPARATION FOR PHASE 2 CONSTRUCTION OF PROPOSED FEATURES.

UPON COMPLETION OF PHASE 2 DEMOLITION, COMPLETE ALL PROPOSED WORK IN THIS AREA INCLUDING ELECTRICAL ROUTING TO NEW EXIT GATES, STORM UTILITIES, PROPOSED CONCRETE, ASPHALT, PAINT, AND SEEDING.

# PHASE 3:

ONCE PHASE 2 CONSTRUCTION IS COMPLETE AND TRAFFIC CAN FLOW BETWEEN LOTS 8 AND 9, BEGIN PHASE 3 AT DIRECTION OF COR. DEMOLISH PHASE 3 CURB, SIDEWALKS, PAVEMENT, AND ASSOCIATED SITE FEATURES IN PREPARATION FOR PHASE 3 CONSTRUCTION OF PROPOSED FEATURES. VEHICULAR MOVEMENT THROUGH LOT 9 TO REMAIN (WITH AT LEAST ONE DIRECT ENTRANCE AND EXIT TO BOTH WAREHOUSE WAY AND LOT 8) THROUGHOUT THIS PHASE.

UPON COMPLETION OF PHASE 3 DEMOLITION, COMPLETE ALL PROPOSED WORK IN THIS AREA INCLUDING PROPOSED CONCRETE, ASPHALT, PAINT/THERMOPLASTIC, AND SEEDING.

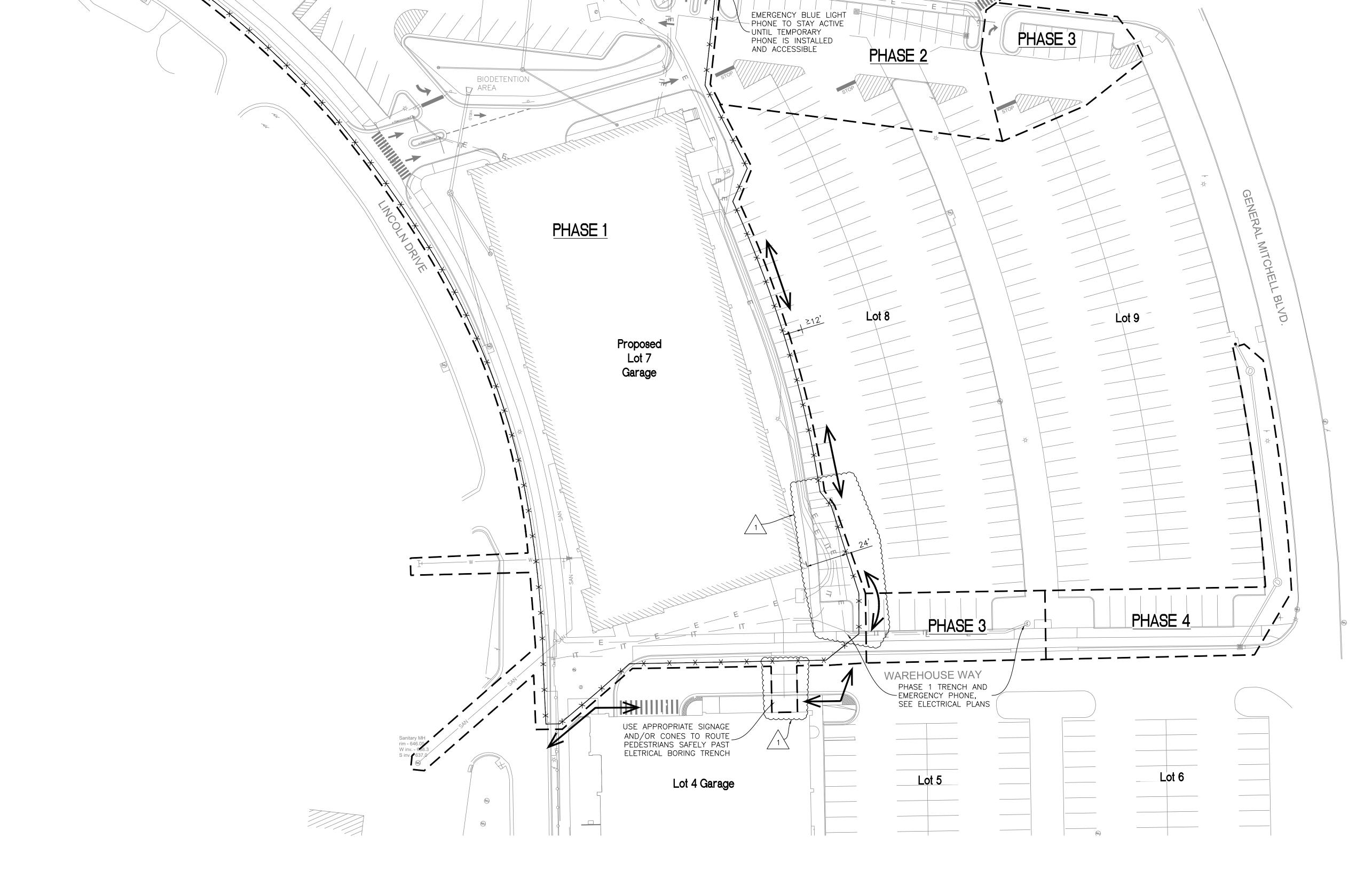
# PHASE 4:

ONCE PHASE 3 CONSTRUCTION IS COMPLETE AND TRAFFIC CAN UTILIZE THE NORTH ENTRANCE TO LOT 9, BEGIN PHASE 4 AT DIRECTION OF COR. DEMOLISH PHASE 4 CURB, SIDEWALKS, PAVEMENT, AND ASSOCIATED SITE FEATURES IN PREPARATION FOR PHASE 4 CONSTRUCTION OF PROPOSED FEATURES. VEHICULAR MOVEMENT THROUGH LOT 8 TO REMAIN (WITH AT LEAST ONE DIRECT ENTRANCE AND EXIT TO BOTH WAREHOUSE WAY AND LINCOLN DRIVE) THROUGHOUT THIS PHASE.

UPON COMPLETION OF PHASE 4 DEMOLITION, COMPLETE ALL PROPOSED WORK IN THIS AREA BEGINNING WITH THE PROPOSED STORM SEWER TRENCHING AND RELOCATION OF ELECTRICAL LIGHTING LINE WHERE NEEDED. SITE WORK ALSO INCLUDES CONCRETE, ASPHALT, PAINT, AND SEEDING.

# NOTES FOR ALL PHASES:

CONTRACTOR TO INSTALL TRAFFIC CONTROL DEVICES PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, AS NECESSARY TO CONTROL VEHICULAR AND PEDESTRIAN TRAFFIC. CONDUCT DEMOLITION AND CONSTRUCTION ACTIVITIES IN SUCH A MANNER TO PROVIDE MINIMUM TRAFFIC AND PEDESTRIAN DISRUPTIONS.



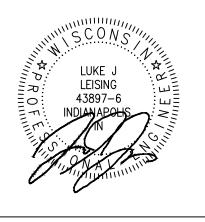
29 APR 2016

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5000 W. National Ave. Milwaukee, WI 53295

U.S. Department of Veterans Affairs

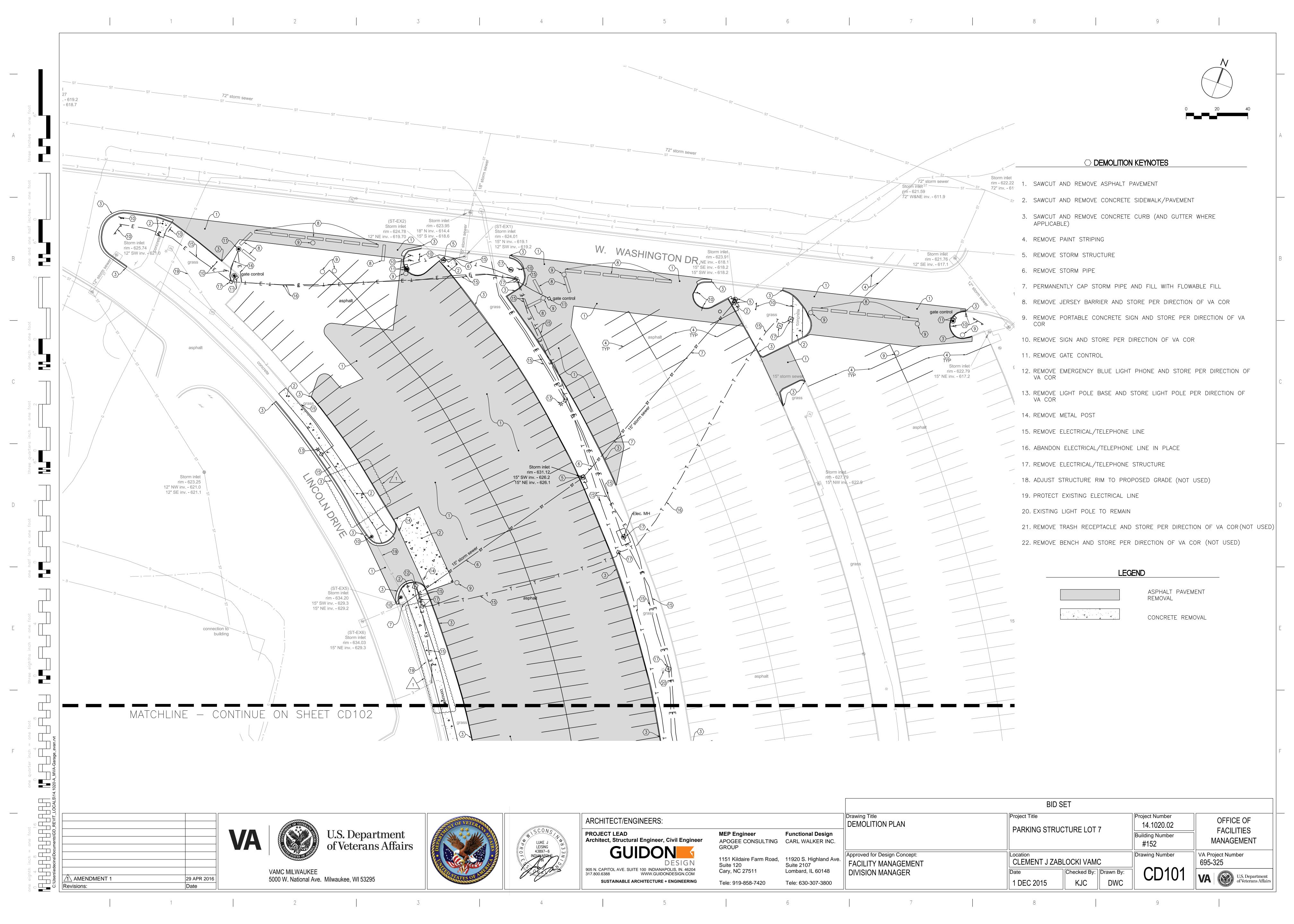


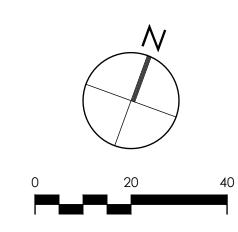


ARCHITECT/ENGINEERS: PROJECT LEAD **Architect, Structural Engineer, Civil Engineer** 905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204 SUSTAINABLE ARCHITECTURE + ENGINEERING

MEP Engineer	Functional Design
APOGEE CONSULTING GROUP	CARL WALKER INC.
1151 Kildaire Farm Road, Suite 120 Cary, NC 27511	11920 S. Highland Av Suite 2107 Lombard, IL 60148
Tele: 919-858-7420	Tele: 630-307-3800

	BID	SET			
Drawing Title SITE PHASING PLAN	Project Title PARKING STRI	Project Title PARKING STRUCTURE LOT 7			OFFICE OF FACILITIES
					MANAGEMENT
Approved for Design Concept: FACILITY MANAGEMENT	Location CLEMENT J ZA	Location CLEMENT J ZABLOCKI VAMC		Drawing Number	VA Project Number 695-325
DIVISION MANAGER	Date 1 DEC 2015	Checked By:	Drawn By:	CC002	VA U.S. Department of Veterans Affair





# □ DEMOLITION KEYNOTES

- 1. SAWCUT AND REMOVE ASPHALT PAVEMENT
- 2. SAWCUT AND REMOVE CONCRETE SIDEWALK/PAVEMENT
- 3. SAWCUT AND REMOVE CONCRETE CURB (AND GUTTER WHERE APPLICABLE)
- 4. REMOVE PAINT STRIPING
- 5. REMOVE STORM STRUCTURE (NOT USED)
- 6. REMOVE STORM PIPE (NOT USED)
- 7. PERMANENTLY CAP STORM PIPE AND FILL WITH FLOWABLE FILL (NOT USED)
- 9. REMOVE PORTABLE CONCRETE SIGN AND STORE PER DIRECTION OF VA

8. REMOVE JERSEY BARRIER AND STORE PER DIRECTION OF VA COR

- 10. REMOVE SIGN AND STORE PER DIRECTION OF VA COR
- 11. REMOVE GATE CONTROL (NOT USED)
- 12. REMOVE EMERGENCY BLUE LIGHT PHONE AND STORE PER DIRECTION OF VA COR
- 13. REMOVE LIGHT POLE BASE AND STORE LIGHT POLE PER DIRECTION OF VA COR (NOT USED)
- 14. REMOVE METAL POST
- 15. REMOVE ELECTRICAL/TELEPHONE LINE
- 16. ABANDON ELECTRICAL/TELEPHONE LINE IN PLACE (NOT USED)
- 17. REMOVE ELECTRICAL/TELEPHONE STRUCTURE
- 18. ADJUST STRUCTURE RIM TO PROPOSED GRADE (NOT USED)
- 19. PROTECT EXISTING ELECTRICAL LINE
- 20. EXISTING LIGHT POLE TO REMAIN
- 21. REMOVE TRASH RECEPTACLE AND STORE PER DIRECTION OF VA COR
- 22. REMOVE BENCH AND STORE PER DIRECTION OF VA COR

**LEGEND** 

ASPHALT PAVEMENT REMOVAL

CONCRETE REMOVAL

4 4

	VA	
1		۱/Δ

29 APR 2016

Date

15" NE inv. - 629.3

Sanitary MH

rim - 646.05

| W inv. - 638.3|

S inv. - 637.0

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(8 SIGNS)

15" NE inv. 638.6 3

12" SW inv. 638.6 7

rim - 646.63

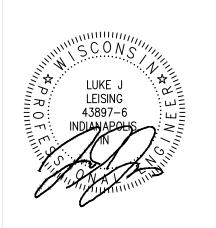
storage tanksl X

12" W & NE inv. - 640 0 6"/3 W inv. - 640 2

U.S. Department of Veterans Affairs VAMC MILWAUKEE

5000 W. National Ave. Milwaukee, WI 53295





asphalt

48" storm sewer

ELECTRICAL MAIN LINE TO BE PROTECTED

WAREHOUSE WAY

15" storm sewer

rim - 640.97

concrete curb

15" NE inv. 635.1

15" SW inv. 635.5

) 12" SE inv. 637.4



1 2 8 9

MATCHLINE - CONTINUE ON SHEET CD101 \_\_\_

rim - 635.29

19 12" S inv. 631.8 4" SE inv. 632.8

rim - 636.7

18" NE inv. 630.7

15" SW inv. 631.1

12" storm sewer

Storm MH6T -

\_ rim - 637.58

48" SW&E inv. - 610.5

12" NW inv. 631.2

12" SE inv. 631.4 E

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Drawing Title

rim - 631.6

12" SE inv. 627.8

4" NW inv. 629.2

sewer

Storm inlet

21" NE inv. 626.7

12" N inv. 626.8

12" storm sewer

ST \_\_\_\_\_48" storm sewer

12" SE inv. 626.7

18" SW inv. 627.2

rim - 633.2

rim - 632.61

21" SW inv. 625.4

21" NE inv. 625.3

21" storm sewer

Storm MH

rim - 633.2

21" SW inv. 623.7

21" NE inv. 623.5

Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER

DEMOLITION PLAN PARKING STRUCTURE LOT 7 1 DEC 2015

CLEMENT J ZABLOCKI VAMC Checked By: Drawn By DWC KJC

**BID SET** 

Project Title

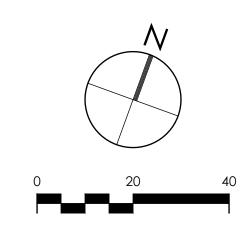
**Building Number** MANAGEMENT #152 Drawing Number VA Project Number 695-325 VA U.S. Department of Veterans Affairs

OFFICE OF

**FACILITIES** 

Project Number

14.1020.02



# ○ SITE KEYNOTES

- 1. CONCRETE SIDEWALK
- 2. CONCRETE CURB
- 3. INTEGRAL CONCRETE WALK AND CURB
- 4. CONCRETE CURB AND GUTTER
- 5. CURB TYPE TRANSITION
- 6. REVERSE CONCRETE CURB AND GUTTER
- 7. MOUNTABLE CONCRETE CURB (NOT USED)
- 8. CONCRETE PAVEMENT
- 9. ASPHALT PAVEMENT
- 10. ASPHALT 1.5" MILL AND RESURFACE
- 11. PARKING STRIPING, 4 INCH WIDE, PAINTED, WHITE
- 12. TRAFFIC ARROW, THERMOPLASTIC, WHITE
- 13. TRAFFIC TEXT, THERMOPLASTIC, WHITE
- 14. CROSSWALK, WHITE, THERMOPLASTIC, 6' LONG BY 1' WIDE WITH 2'
- 15. TRAFFIC LANE STRIPING, DASHED, 4 INCH WIDE, PAINTED, WHITE
- 16. RELOCATED BLUE EMERGENCY LIGHT PHONE (SEE ELECTRICAL
- 17. DO NOT ENTER SIGN, VA SIGN GUIDE: EN-10.02
- 18. ONE WAY SIGN, VA SIGN GUIDE: EN-10.06
- 19. STOP SIGN, VA SIGN GUIDE: EN-10.1
- 20. RELOCATED LIGHT POLE
- 21. SIDEWALK CURB RAMP WITH TRUNCATED DOMES
- 22. 3' CONCRETE MEDIAN, SEE DETAIL ON SHEET CS501 (NOT USED)
- 23. 4' CONCRETE MEDIAN, SEE DETAIL ON SHEET CS501
- 24. EMERGENCY ACCESS GATE, SEE SHEETS CS501 AND AP401 (NOT USED)
- 25. EMERGENCY ACCESS RAIL, SEE SHEETS CS501 AND AP401 (NOT USED)
- 26. STOP BAR, 2' WIDE, THERMOPLASTIC, WHITE
- 27. ALUMINUM HANDRAIL
- 28. CURB TAPER
- 29. CONCRETE FLUSH CURB
- 30. ASPHALT PATCH WHERE GATE POST WAS REMOVED
- 31. ACCESS CONTROL GATE, SEE SHEET AP401
- 32. BIODETENTION AREA LIMITS

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ASPHALT PAVEMENT RESURFACE

**BID SET** 

CONCRETE PAVEMENT

ASPHALT PAVEMENT

CONCRETE SIDEWALK

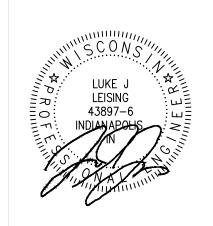
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AMENDMENT 1	29 APR 2016	

Date



MATCHLINE - CONTINUE ON SHEET CS102





BLDG CORNER N:293816.1732 E:588389.2915

SEE ENLARGED VIEW

ON THIS SHEET

PROPOSED 4—LEVEL PARKING GARAGE

GRASS ノ AREA

BLDG CORNER N:293739.0280 E:588283.1577



W. WASHINGTON DR. 3

— GRASS AREA

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**ENLARGED VIEW** 

SCALE: 1"=10'

(12)

BLDG CORNER N:293816.1732 E:588389.2915

	Drawing Title	Project Tit
	SITE PLAN	PARKI
	Approved for Design Concept:	Location
ı	FACILITY MANAGEMENT	CLEME
	DIVISION MANAGER	Date
		1 DEC

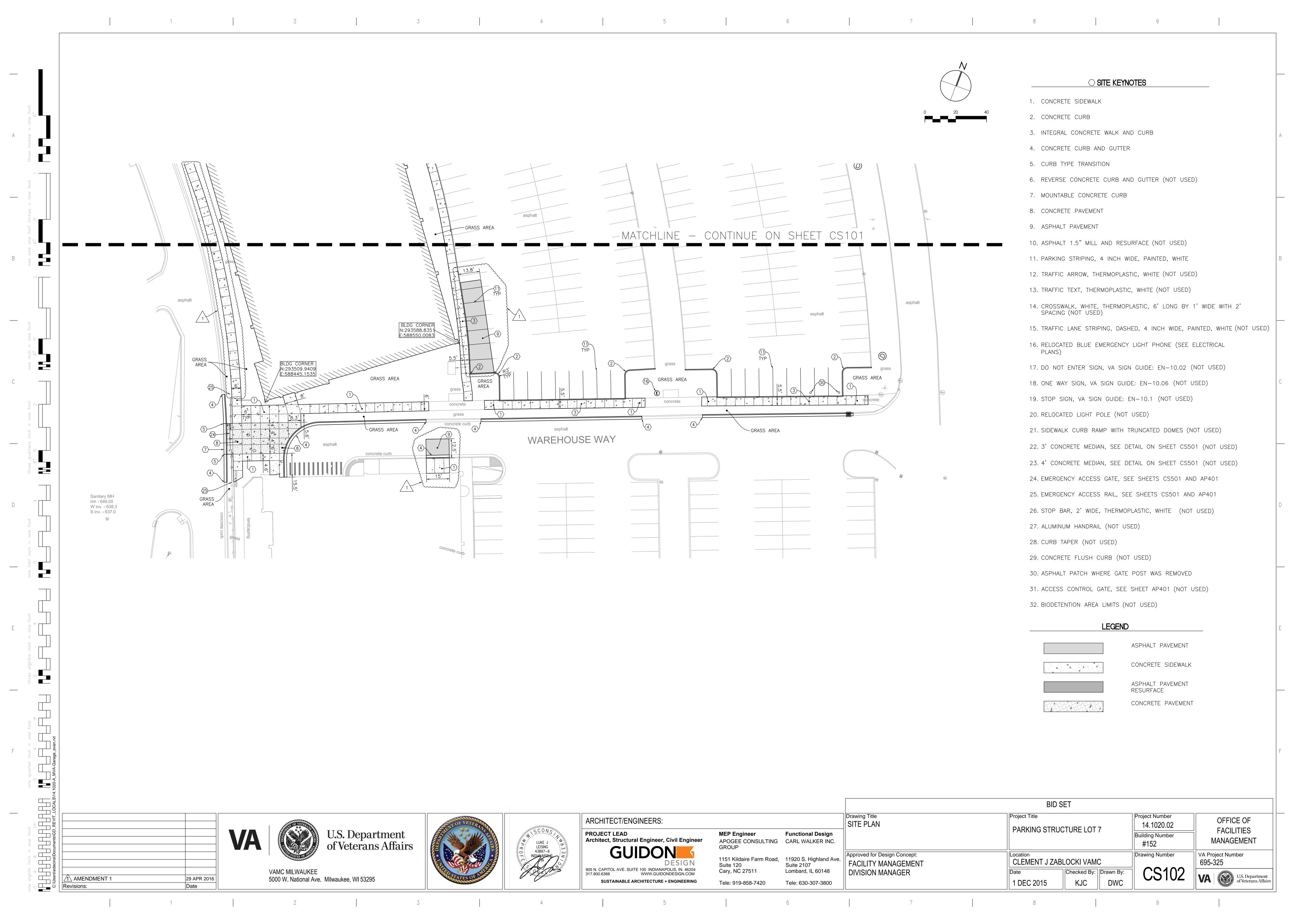
SEE SHEETS SB502 AND SF402 FOR CONCRETE

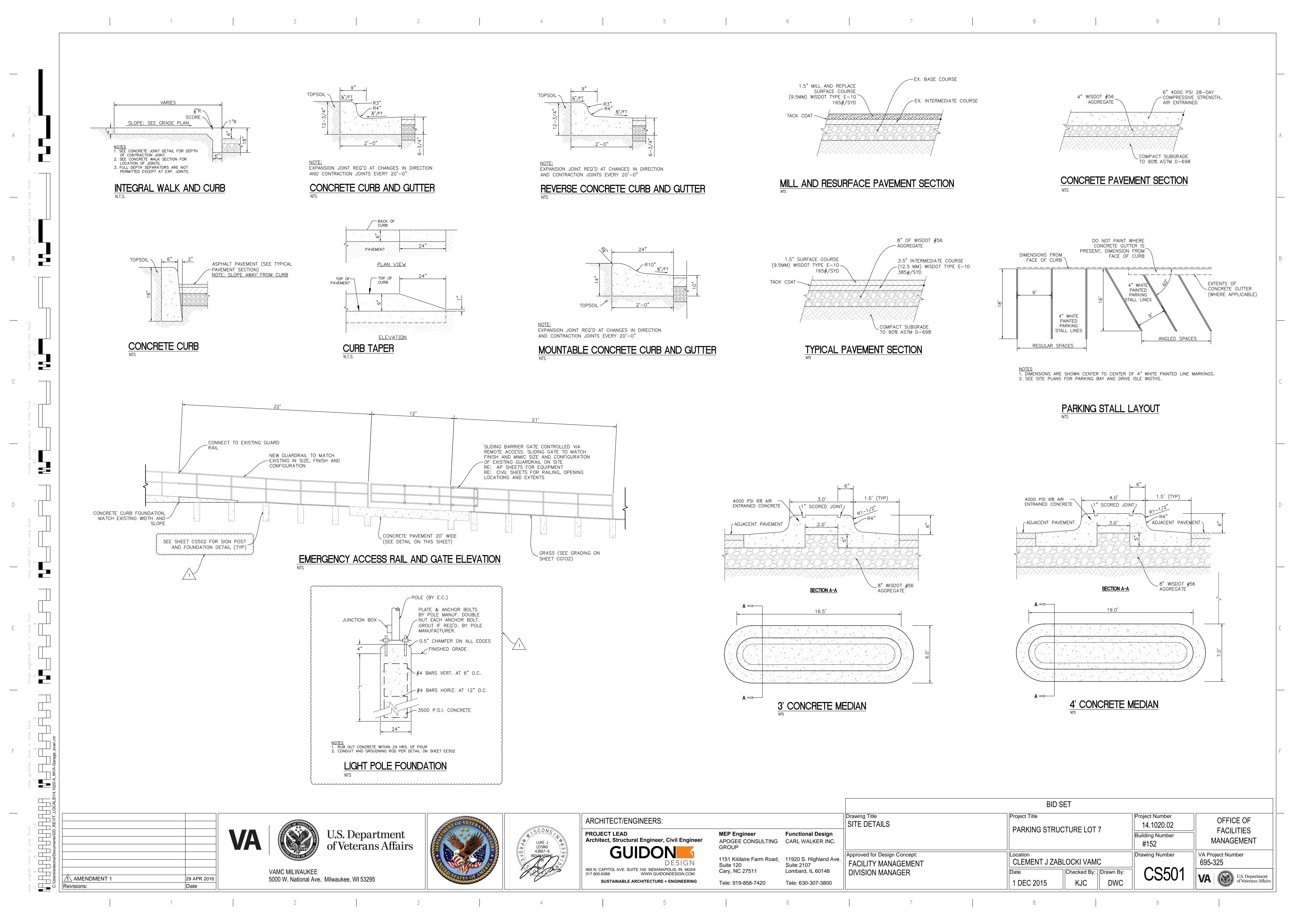
STAIR DETAIL

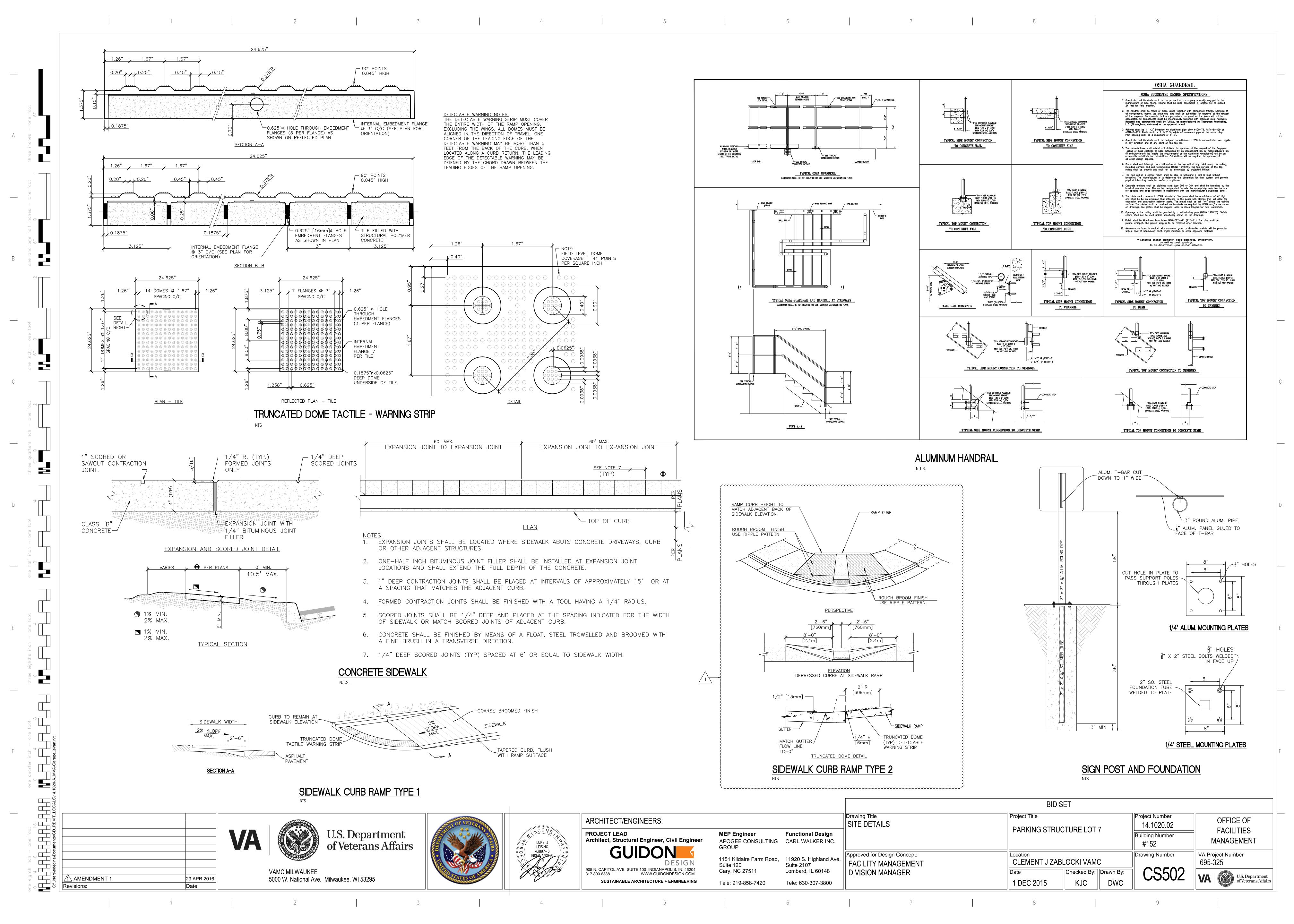
GRASS AREA

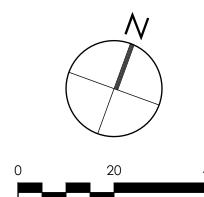
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oroved for Design Concept: ACILITY MANAGEMENT	Location CLEMENT J ZABLOCKI VAMC				
IVISION MANAGER	Date	Checked By:	Drawn I		
	1 DEC 2015	KJC	DW		

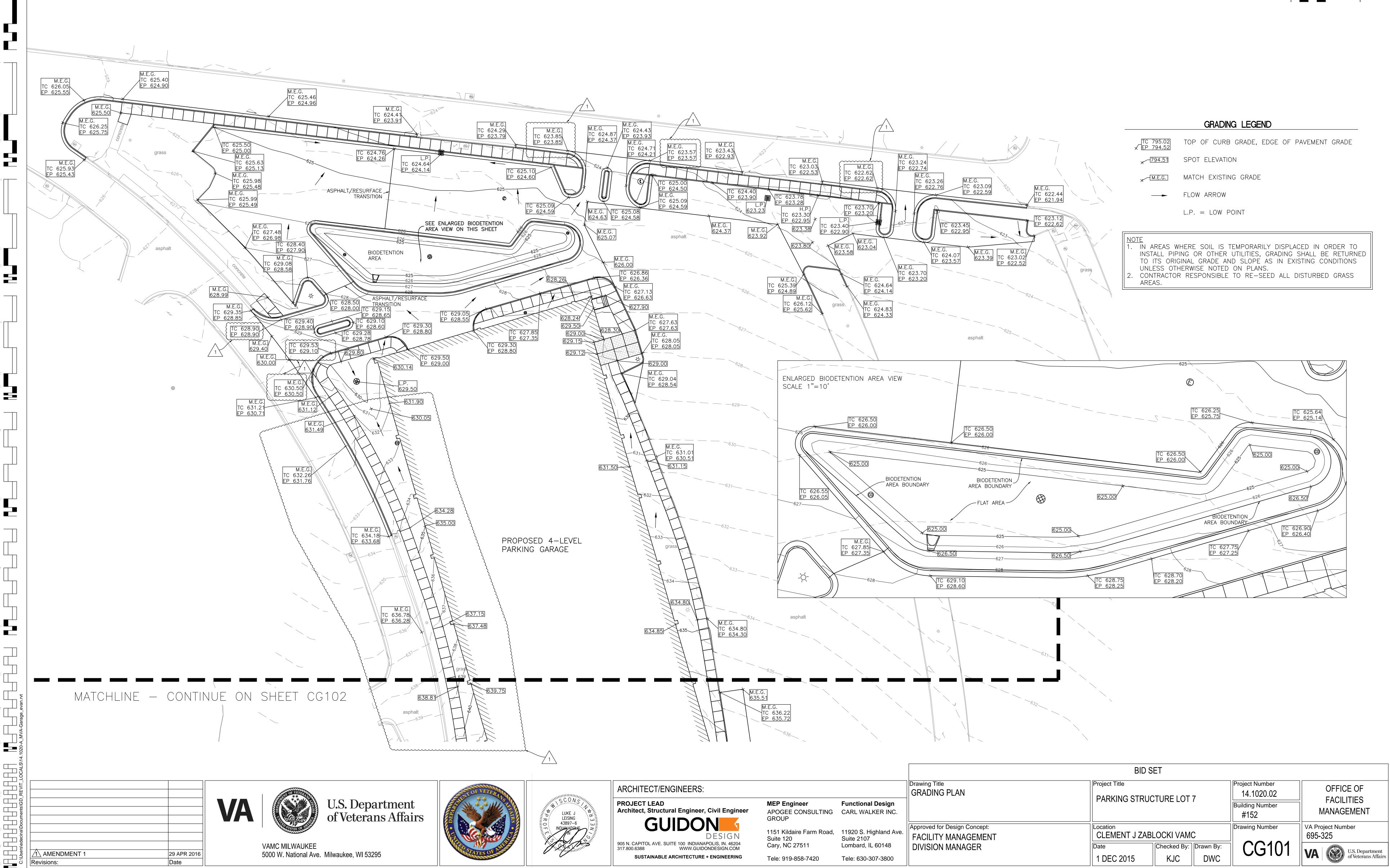
	Project Title PARKING STRUCTURE LOT 7		Project Number 14.1020.02  Building Number #152	OFFICE OF FACILITIES MANAGEMENT	
Concept: GEMENT	Location CLEMENT J ZABLOCKI VAMC		Drawing Number	VA Project Number 695-325	
GER	Date 1 DEC 2015	Checked By:	Drawn By:  DWC	CS101	VA U.S. Department of Veterans Affairs







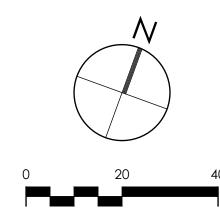


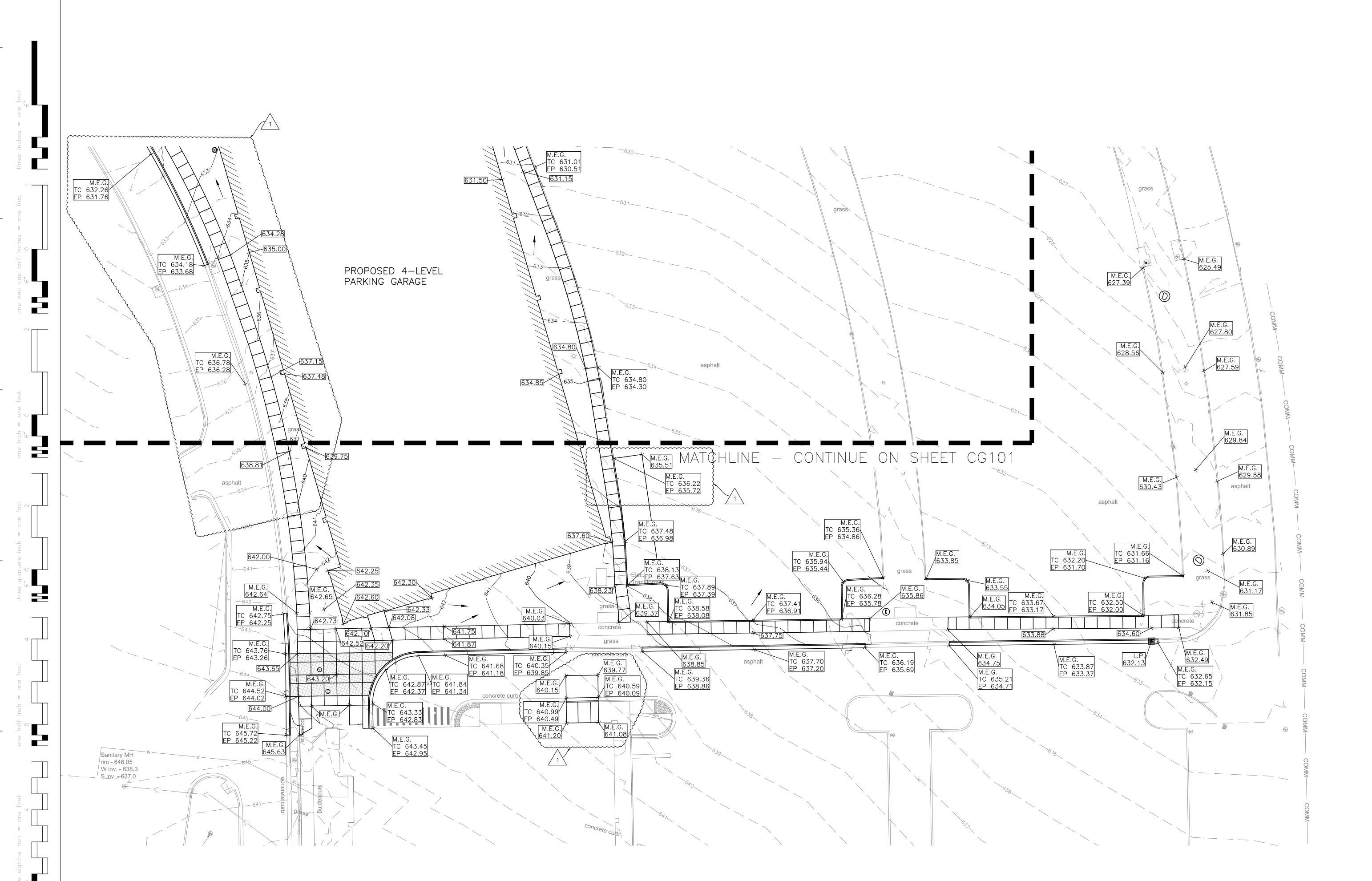


Date

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## GRADING LEGEND

TC 795.02 X EP 794.52 TOP OF CURB GRADE, EDGE OF PAVEMENT GRADE

× 794.51 SPOT ELEVATION

── FLOW ARROW

MATCH EXISTING GRADE

L.P. = LOW POINT

1. IN AREAS WHERE SOIL IS TEMPORARILY DISPLACED IN ORDER TO INSTALL PIPING OR OTHER UTILITIES, GRADING SHALL BE RETURNED TO ITS ORIGINAL GRADE AND SLOPE AS IN EXISTING CONDITIONS UNLESS OTHERWISE NOTED ON PLANS.

2. CONTRACTOR RESPONSIBLE TO RE—SEED ALL DISTURBED GRASS

AREAS.

 $\stackrel{\frown}{1}$  AMENDMENT 1 29 APR 2016

Date

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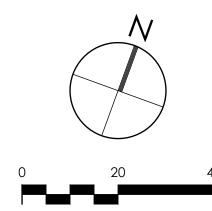
ARCHITECT/ENGINEERS:
PROJECT LEAD Architect, Structural Engineer, Civil Engineer
GUIDON
DESIGN
905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204 317.800.6388 WWW.GUIDONDESIGN.COM
SUSTAINABLE ARCHITECTURE + ENGINEERING

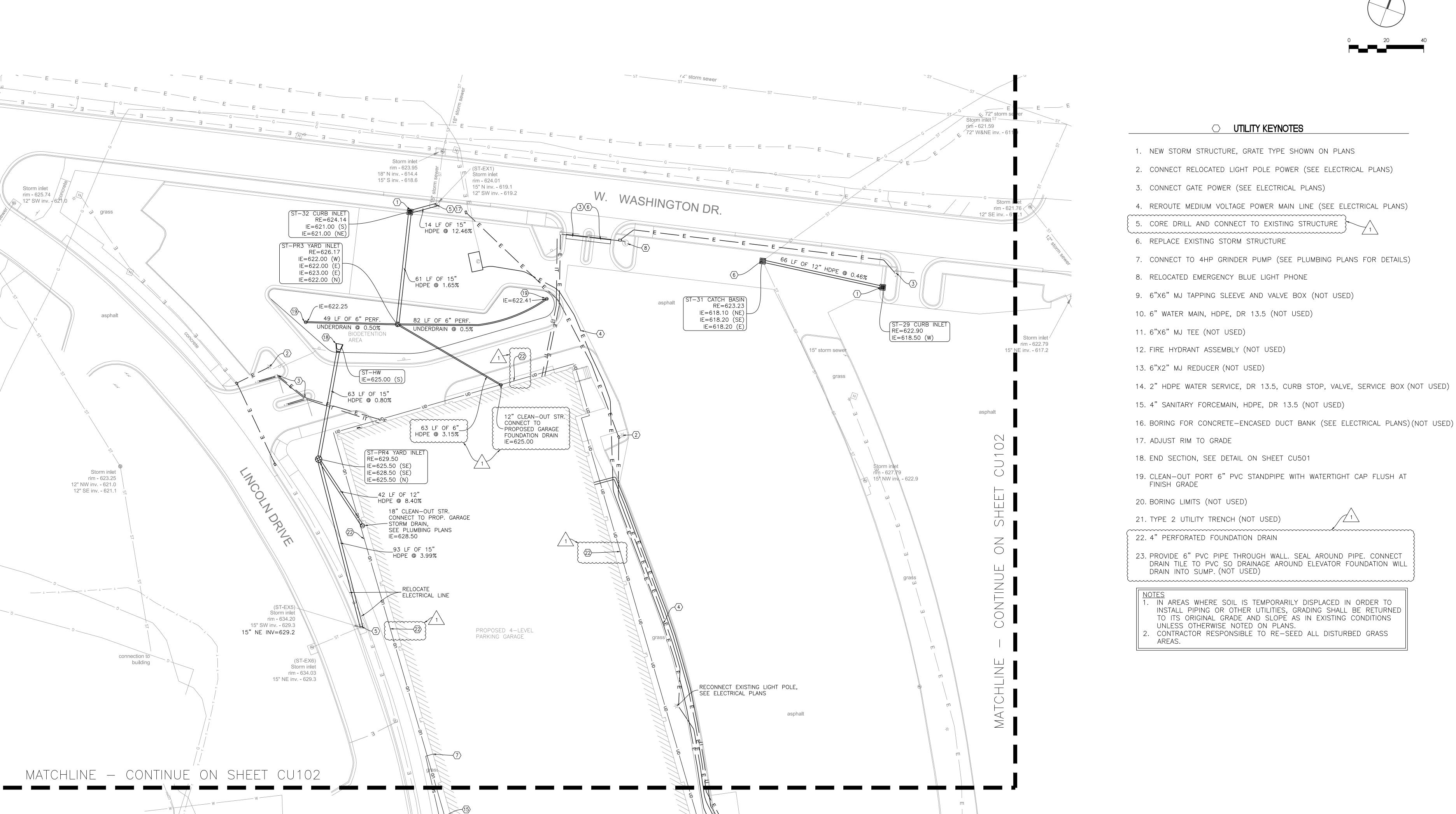
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	BID S	SET				
awing Title RADING PLAN	Project Title PARKING STRU	CTURE LOT	7	Project Number 14.1020.02	OFFICE OF FACILITIES	
	TARRING STRUCTURE LOT T			Building Number #152	MANAGEMENT	
pproved for Design Concept: ACILITY MANAGEMENT	CLEMENT J ZABLOCKI VAMC		Drawing Number	VA Project Number 695-325		
DIVISION MANAGER	Date 1 DEC 2015	Checked By:	Drawn By:	CG102	VA U.S. Department of Veterans Affairs	

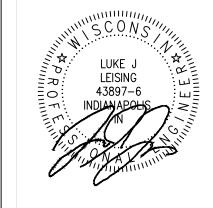




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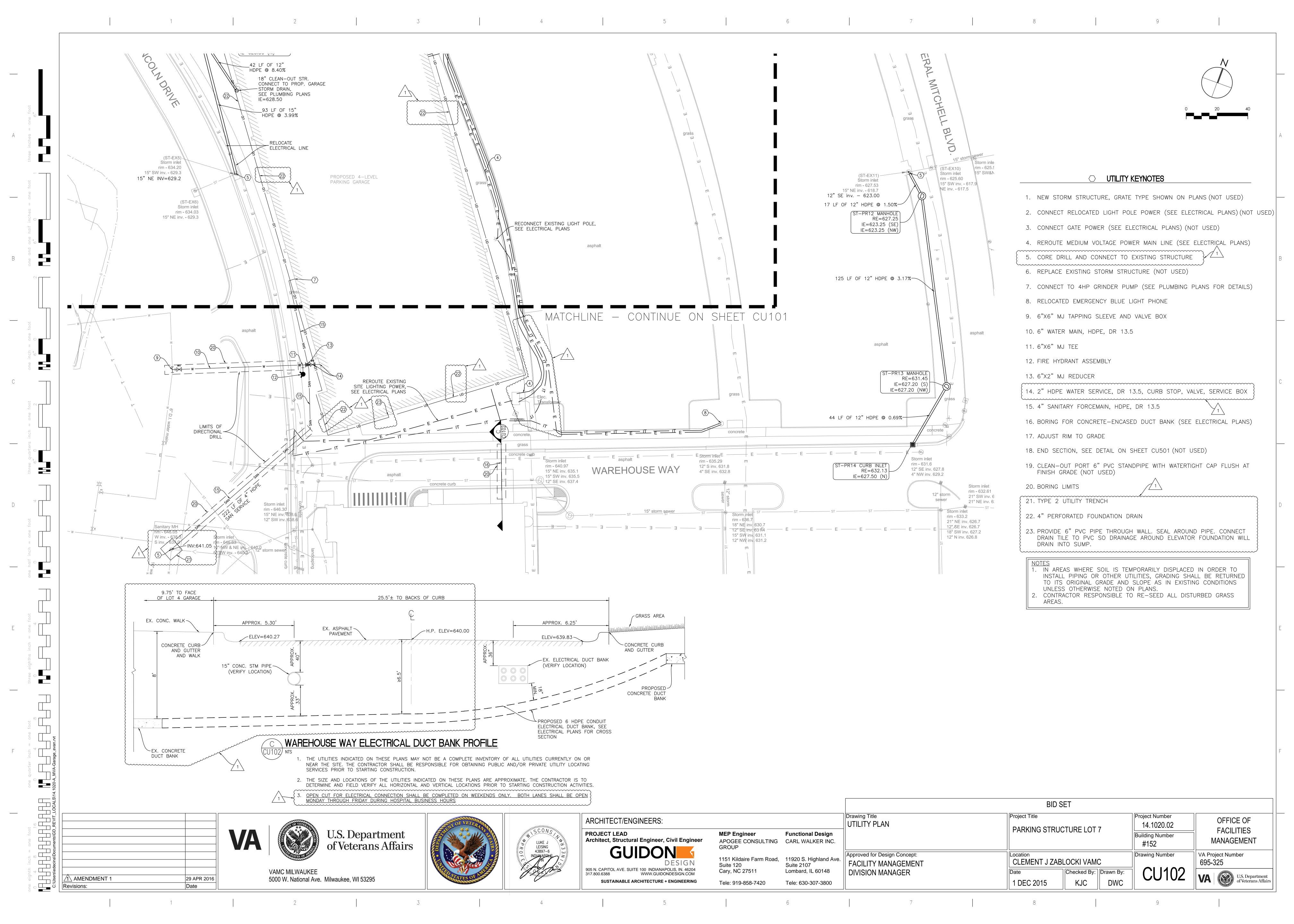


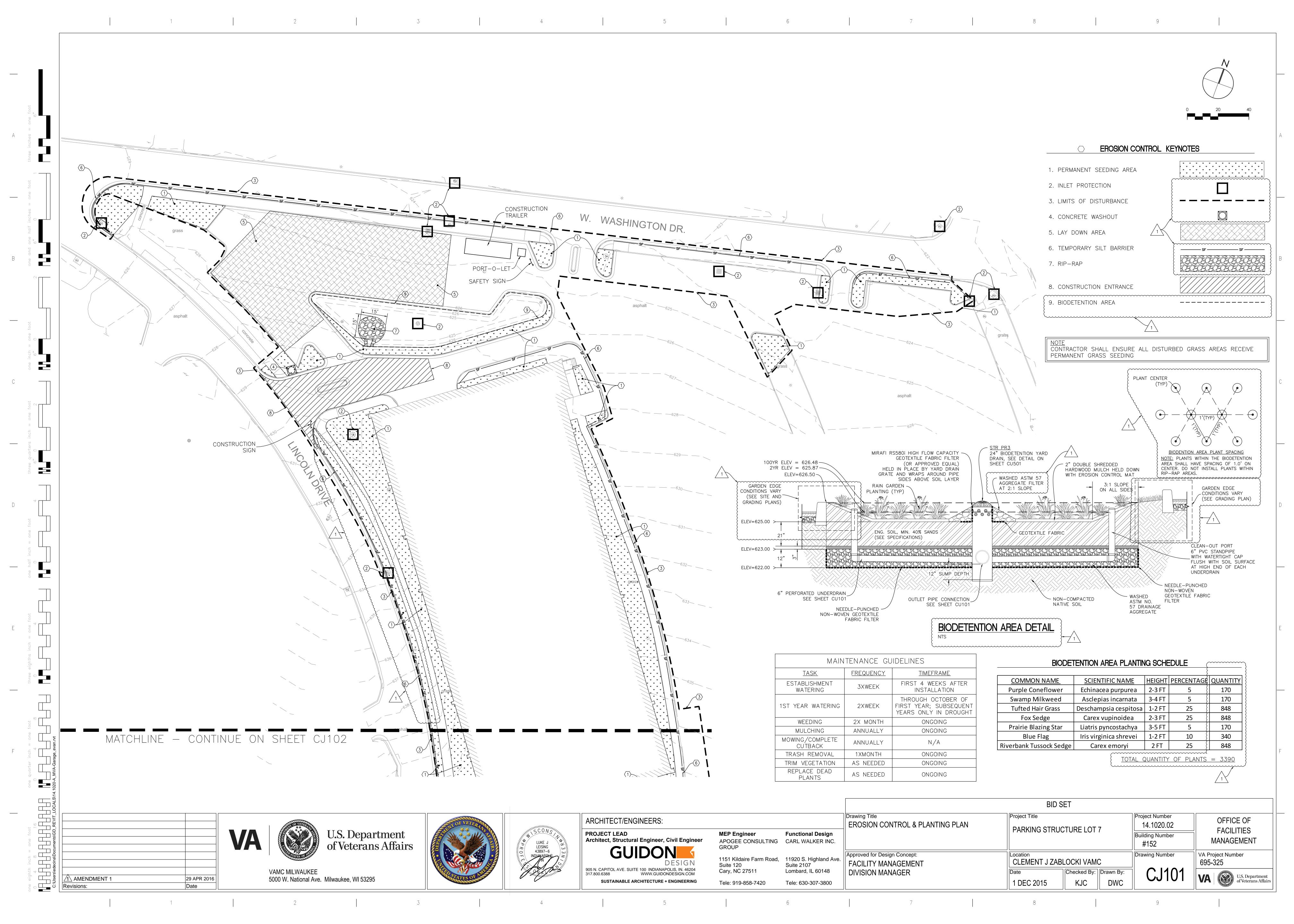


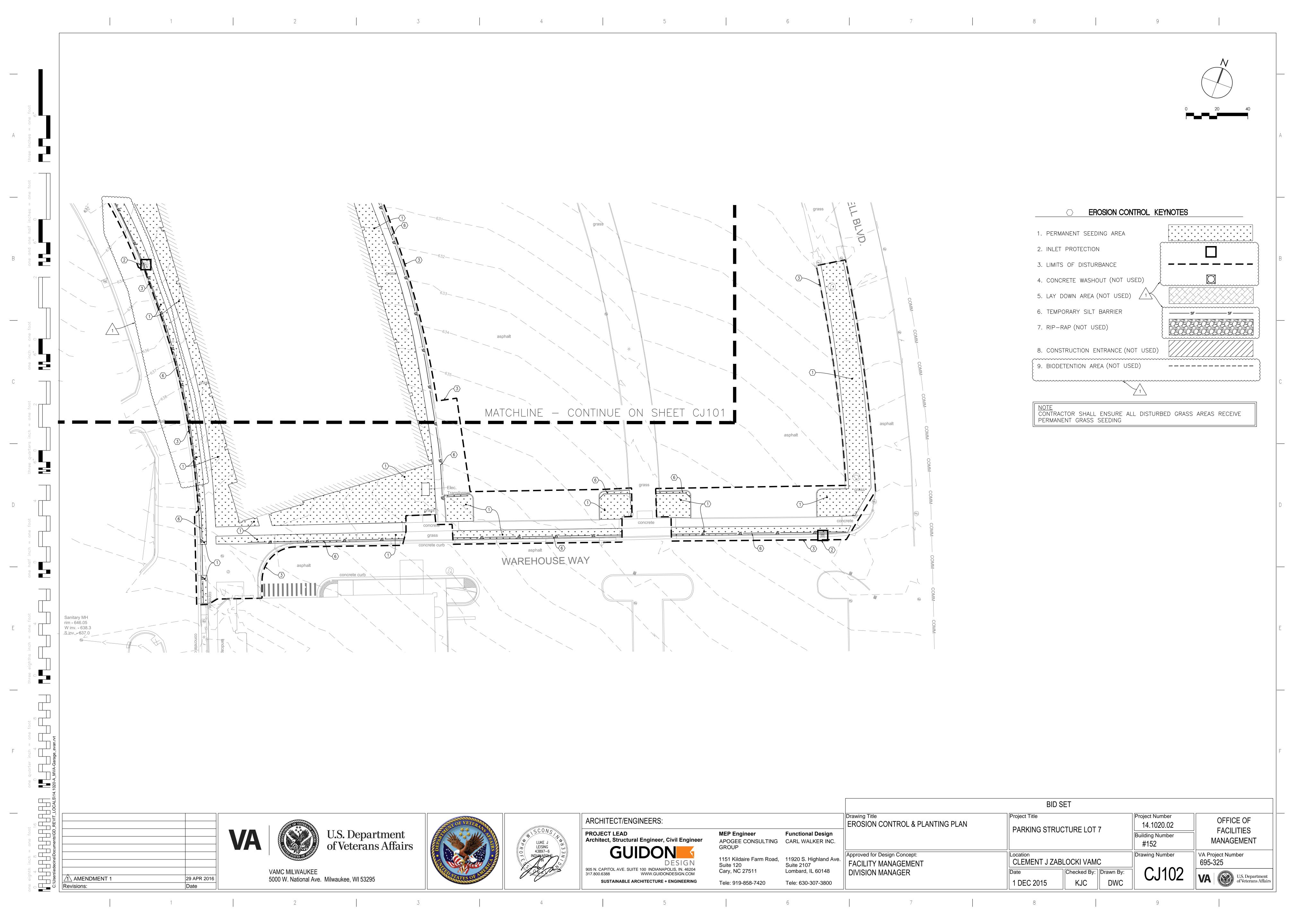
MEP Engineer APOGEE CONSULTING GROUP	Functional Design CARL WALKER INC.
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Tele: 919-858-7420	Tele: 630-307-3800

	BID S	SET
Drawing Title UTILITY PLAN	Project Title PARKING STRU	CTURE LOT
Approved for Design Concept: FACILITY MANAGEMENT	Location CLEMENT J ZABLO	
DIVISION MANAGER	Date	Checked By
	1 DEC 2015	KJC

)T 7	Project Number 14.1020.02	OFFICE OF FACILITIES MANAGEMENT		
<b>71 1</b>	Building Number #152			
MC	Drawing Number	VA Project Number 695-325		
Drawn By:  DWC	CU101	VA U.S. Department of Veterans Affa		







THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS.

THE GENERAL NOTES ON THE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE FULL WRITTEN MATERIAL SPECIFICATIONS (IF ANY) FOR THE PROJECT. IF A DISCREPANCY OCCURS BETWEEN THE NOTES AND THE FULL SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

NO PENETRATIONS THROUGH STRUCTURAL ELEMENTS, OTHER THAN THOSE SHOWN ON THE DRAWINGS, SHALL BE MADE WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.

### CONCRETE MIX DESIGN SUBMITTAL

THE CONTRACTOR SHALL SUBMIT FOR THE REVIEW OF THE STRUCTURAL ENGINEER A MIX DESIGN FOR EACH PROPOSED CLASS OF CONCRETE. EACH MIX DESIGN SHALL BE IDENTIFIED BY A MIX NUMBER OR OTHER UNIQUE IDENTIFICATION. THE CONTRACTOR SHALL NOT VARY FROM THE MIX DESIGNS NOR USE ANY CONCRETE OTHER THAN THE APPROVED MIX DESIGNS WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER. MIX DESIGN SUBMITTALS SHALL INCLUDE THE FOLLOWING

- MIX DESIGN NUMBER OR UNIQUE IDENTIFICATION AND INTENDED LOCATION OF PLACEMENT.
- CEMENT TYPE, PROPORTION AND NAME OF MANUFACTURER. FLY ASH PROPORTION (WHEN USED), LABORATORY ANALYSIS CERTIFICATION, AND NAME AND LOCATION OF
- COURSE AGGREGATE PROPORTION, GRADATION REPORT, NAME AND LOCATION OF SUPPLIER. FINE AGGREGATE PROPORTION, GRADATION REPORT, NAME AND LOCATION OF SUPPLIER.
- MIXING WATER PROPORTION AND SOURCE. ADMIXTURE DOSAGES, PRODUCT NAME(S) AND MANUFACTURER NAME(S)
- FIBER REINFORCEMENT DOSAGE (WHEN USED), PRODUCT NAME AND MANUFACTURER NAME.
- DESIGN 28-DAY COMPRESSIVE STRENGTH (F'C). DESIGN SLUMP RANGE.
- DESIGN AIR-ENTRAINMENT (FOR CONCRETE REQUIRING ENTRAINED AIR). STATISTICAL ANALYSIS OF LABORATORY STRENGTH TEST DATA IN ACCORDANCE WITH "STANDARD DEVIATION" DETERMINATION OUTLINED IN ACI 318.

### SHOP DRAWING SUBMITTALS

THE CONTRACTOR SHALL PREPARE DETAILED SHOP DRAWINGS TO ENABLE HIM TO FABRICATE, ERECT AND CONSTRUCT ALL PARTS OF THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. THESE SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL DIMENSIONS, ACCURACY AND FIT OF WORK. ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE STRUCTURAL ENGINEER. DRAWINGS SUBMITTED WITHOUT CONTRACTOR'S REVIEW WILL BE RETURNED UNCHECKED.

SUBMIT ELECTRONIC VERSION OF SHOP DRAWINGS. SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT AND UPLOAD TO BUZZSAW. SUBMIT SHOP DRAWINGS FOR EACH OF THE FOLLOWING ITEMS:

- CONCRETE MASONRY REINFORCEMENT
- STRUCTURAL STEEL (INCLUDING DESIGN CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS CONSTRUCTED FOR ALL CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWINGS)
- PRECAST CONCRETE COMPONENTS (PRECAST LINTELS, ARCHITECTURAL PRECAST) GLASS CURTAIN WALL SYSTEM (INCLUDING DESIGN CALCULATIONS AND CONNECTION DETAILS SEALED BY A PROFESSIONAL
- ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS CONSTRUCTED) METAL MESH SYSTEM (INCLUDING DESIGN CALCULATIONS AND CONNECTION DETAILS SEALED BY A PROFESSIONAL

ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS CONSTRUCTED)

PRODUCT DATA SUBMITTALS

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL PRODUCT DATA FOR THE SPECIFIC ITEMS LISTED BELOW. CONTRACTOR SHALL NOT USE PRODUCTS OTHER THAN THOSE SUBMITTED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.

MANUFACTURER'S TRADE NAMES AND NUMBERS USED HEREIN ARE ONLY TO IDENTIFY COLORS, FINISHES, TEXTURES, AND PATTERNS AS A BASIS OF DESIGN. PRODUCTS OF AUTHORIZED EQUAL MANUFACTURER'S EQUIVALENT TO COLORS, FINISHES. TEXTURES, AND PATTERNS OF MANUFACTURERS LISTED THAT MEET REQUIREMENTS OF TECHNICAL SPECIFICATIONS IN EVERY RESPECT MAY BE ACCEPTABLE WITH SUBMITTAL OF A COMPLETED SUBSTITUTION REQUEST CONTAINING ALL PRODUCT DATA. TESTING AND ACTUAL SAMPLES, AND UPON APPROVAL IN WRITING BY CONTRACTING OFFICER.

SUBMIT ELECTRONIC VERSIONS OF PRODUCT DATA. SUBMIT PRODUCT DATA IN ADOBE PDF FORMAT AND UPLOAD TO BUZZSAW.

- FIBER REINFORCEMENT FOR CONCRETE DIAMOND PLATE DOWELS FOR SLABS ON GRADE
- CONCRETE CURING COMPOUND CONCRETE JOINT SEALANT
- WATER STOPS MASONRY JOINT REINFORCEMENT
- EXPANSION ANCHORS ADHESIVE ANCHORS NON-SHRINK GROUT
- **FOUNDATIONS**

FOUNDATION EXCAVATIONS AND SOIL RELATED WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT NUMBER MR155043 PREPARED BY TERRACON DATED JUNE 02, 2015.

FOUNDATIONS HAVE BEEN DESIGNED BASED ON ASSUMED ALLOWABLE CAPACITIES INDICATED BELOW. CONTRACTOR SHALL ENGAGE A LICENSED GEOTECHNICAL ENGINEER TO REVIEW THE SOIL CONDITIONS AT THE SITE AS NECESSARY TO CONFIRM THE ALLOWABLE CAPACITIES PRIOR TO PLACEMENT OF THE FOUNDATIONS. CONFIRMATION OF THE ACCEPTABILITY OF THE SOILS SHALL BE REPORTED IN WRITING TO THE STRUCTURAL ENGINEER.

IF ACTUAL ALLOWABLE CAPACITIES ARE FOUND TO BE LESS THAN THE ASSUMED VALUES, THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER IMMEDIATELY AND SHALL NOT PROCEED WITH FOUNDATION CONSTRUCTION WITHOUT REVIEW BY THE STRUCTURAL ENGINEER. DESIGN ALLOWABLE PILE LOADS:

155 KIPS TENSION: 45 KIPS

FOR PURPOSES OF BIDDING, ESTIMATED PILE TIP ELEVATION IS 65 FEET BELOW THE BOTTOM OF THE PILE CAP. ACTUAL PILE TIP ELEVATION TO BE DETERMINED BY SPECIFIED TESTING PROGRAM. SEE SPECIFICATIONS.

FOUNDATIONS AND SOILS RELATED WORK SHALL BE INSPECTED BY A LICENSED GEOTECHNICAL ENGINEER. WRITTEN FIELD REPORTS SHALL BE FORWARDED TO THE STRUCTURAL ENGINEER AS SOON AS THEY BECOME AVAILABLE.

FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION, THAT DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT, SHALL BE REPORTED TO THE STRUCTURAL ENGINEER AND GEOTECHNICAL ENGINEER BEFORE FURTHER CONSTRUCTION IS

EXCAVATIONS FOR SPREAD FOOTINGS, TRENCH FOOTINGS, CONTINUOUS FOOTINGS AND MAT FOUNDATIONS SHALL BE CLEANED AND HAND TAMPED TO UNIFORM SURFACE AND SHALL BE PROTECTED AND MAINTAINED UNIFORM UNTIL CONCRETE IS PLACED.

BELOW-GRADE WALLS

LATERAL:

DO NOT BACKFILL AGAINST BELOW-GRADE CONCRETE (OR MASONRY) WALLS UNTIL THE CONCRETE (OR MASONRY ASSEMBLAGE) HAS REACHED ITS 28-DAY COMPRESSIVE STRENGTH.

WHERE BACKFILL IS REQUIRED ON BOTH SIDES OF BELOW-GRADE WALLS, BACKFILL EVENLY ON EACH SIDE OF EACH WALL TO PREVENT UNBALANCED SOIL LOADS AGAINST THE WALL. UNLESS NOTED OTHERWISE, DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL THE BASEMENT AND GROUND FLOOR SLABS HAVE BEEN COMPLETELY INSTALLED AND REACHED THEIR 28-DAY COMPRESSIVE STRENGTH AND ALL FLOOR FRAMING AND SLAB

CONNECTIONS TO THE BASEMENT WALLS HAVE BEEN COMPLETELY INSTALLED. WHERE BASEMENT WALLS OCCUR, BACKFILL EVENLY ON ALL SIDES OF THE BUILDING TO PREVENT UNBALANCED SOIL LOADS AGAINST THE BASEMENT STRUCTURE, UNLESS NOTED OTHERWISE.

WHERE IDENTIFIED ON THE PLANS, BRACE WALLS UNTIL ALL FLOOR SLABS HAVE BEEN PLACED AND CURED.

REINFORCED CONCRETE HAS BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318) AND COMMENTARY (ACI 318R) AND ACI GUIDE 362.1R.

MIXING, TRANSPORTING, AND PLACING OF CONCRETE SHALL CONFORM TO THE LATEST EDITION OF THE SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301). READY-MIXED CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ASTM C94. IN CASE OF A DISCREPANCY, THE PLANS

CEMENT SHALL CONFORM TO ASTM C150, TYPE I, UNO.

FLY ASH SHALL CONFORM TO ASTM C618, CLASS C OR F. THE RATIO OF THE AMOUNT (BY WEIGHT) OF FLY ASH TO TOTAL CEMENTITIOUS MATERIALS IN THE MIX SHALL NOT

NORMAL WEIGHT AGGREGATES SHALL CONFORM TO ASTM C33.

WATER-REDUCING ADMIXTURES SHALL CONFORM TO ASTM C494.

AIR-ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260 AND SHALL BE CERTIFIED BY THE MANUFACTURER TO BE COMPATIBLE WITH OTHER

CALCIUM CHLORIDE ADMIXTURES OR ADMIXTURES CONTAINING MORE THAN 0.1 PERCENT CHLORIDE IONS SHALL NOT BE USED.

IN COLD WEATHER CONDITIONS, MIXING, PLACING, FINISHING, CURING AND PROTECTION OF CONCRETE SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF ACI 306R, COLD WEATHER CONCRETING.

IN HOT WEATHER CONDITIONS, MIXING, PLACING, FINISHING, CURING AND PROTECTION OF CONCRETE SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF ACI 305R, HOT WEATHER CONCRETING.

USE OF CONSTRUCTION JOINTS AT LOCATIONS OTHER THAN THOSE INDICATED ON THE DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL

SLUMP FOR PUMPED CONCRETE SHALL BE MEASURED AT POINT OF DISCHARGE.

NORMAL WEIGHT CONCRETE SHALL BE USED IN THE FOLLOWING AREAS AND SHALL HAVE THE PROPERTIES AS SHOWN BELOW:

DESCRIPTION	F'C PSI, MIX	MAXIMUM CHLORIDE ION CONTENT	MAX W/C RATIO	AVERAGE ENTRAINED AIR	MINIMUM CEMENTITIOUS MATERIALS CONTENT, LB/CYD	MAXIMUM SLUMP	MAXIMUM SLUMP FOR CONCRETE CONTAINING HIGH-RANGE WATER-REDUCING ADMIXTURE	MAXIMUM COARSE AGGREGATE SIZE
FOUNDATIONS & PILE CAPS	4000 STD	0.30%	0.48	N/A	470	4"	8" AAC	1.5"
FOUNDATION WALLS & GRADE BEAMS	4000 STD	0.30%	0.48	N/A	470	4"	8" AAC	1"
RETAINING WALLS & CURBS/SIDEWALKS/SLABS EXPOSED TO DE-ICERS	4000 CNA	0.15%	0.45	6% +/- 1%	517	4"	8" AAC	1"
SLABS-ON-GRADE	4000 CNA/SF	0.15%	0.48	6% +/- 1%	470	4"	8" AAC	1"

"STD" INDICATES A CONCRETE MIX DESIGN IN ACCORDANCE WITH SPECIFICATION WHICH DOES NOT REQUIRE A SILICA FUME, GGBS/FLY ASH OR CALCIUM

- "CNA" INDICATES A CONCRETE MIX DESIGN IN ACCORDANCE WITH SPECIFICATION WHICH CONTAINS 3 GAL/CYD OF CALCIUM NITRITE CORROSION-
- "SF" INDICATES A CONCRETE MIX DESIGN WITH 1.5 LBS STRUCTURAL FIBERS PER CYD OF CONCRETE. "AAC" MEANS SLUMP IS AFTER ADMIXTURE IS ADDED TO CONCRETE WITH 2 TO 4 INCH SLUMP.

CONTRACTOR SHALL BASE BIDS ON THE INDICATED NUMBER, DIAMETER AND DESIGN LENGTH OF AUGER CAST PILES PLUS ONE TEST PILE OF THE SAME DIAMETER AND LENGTH. PILE CONTRACTOR SHALL SUBMIT WITH BID WRITTEN CERTIFICATION THAT CONTRACTOR HAS THE TECHNICAL QUALIFICATIONS, EXPERIENCE, TRAINED PERSONNEL AND FACILITIES TO INSTALL AUGER CAST PILES AS INDICATED.

SUBMIT TO THE STRUCTURAL ENGINEER THE PROPOSED CONCRETE GROUT MIX DESIGN FOR REVIEW PRIOR TO COMMENCEMENT OF PILING

GROUT FLUIDIFIER SHALL CONFORM TO ASTM C 937, EXCEPT THAT EXPANSION SHALL NOT EXCEED 4 PERCENT. THE FLUIDIFIER SHALL BE A COMPOUND POSSESSING CHARACTERISTICS THAT WILL INCREASE THE FLOWABILITY OF THE MIXTURE, ASSIST IN THE DISPERSAL OF CEMENT GRAINS, AND NEUTRALIZE THE SETTING SHRINKAGE OF THE HIGH-STRENGTH CEMENT MORTAR.

LOCATE EXISTING UNDERGROUND UTILITIES BEFORE INSTALLING PILES. IF ADJACENT UTILITIES ARE TO REMAIN IN PLACE, PROVIDE PROTECTION FROM DAMAGE DURING PILING OPERATIONS. SHOULD UNCHARTED OR INCORRECTLY CHARTED PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, ADAPT INSTALLATION PROCEDURE IF NECESSARY TO PREVENT DAMAGE TO UTILITIES. COOPERATE WITH OWNER AND UTILITY COMPANIES IN KEEPING SERVICES AND FACILITIES IN OPERATION WITHOUT INTERRUPTION. REPAIR DAMAGED UTILITIES TO SATISFACTION OF UTILITY OWNER.

PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS AND OTHER FACILITIES FROM DAMAGE CAUSED BY PILE INSTALLATION OPERATIONS. ENGAGE A QUALIFIED LAND SURVEYOR OR PROFESSIONAL ENGINEER TO PERFORM SURVEYS. LAYOUTS AND MEASUREMENTS FOR AUGER CAST PILES. RECORD AND MAINTAIN DETAILED INFORMATION PERTINENT TO EACH PILE AND COORDINATE WITH OWNER'S TESTING AND INSPECTING AGENCY TO PROVIDE DATA FOR REQUIRED REPORTS.

CONSTRUCT A TEST PILE OF SAME DIAMETER, LENGTH AND DEPTH AS PERMANENT PILES TO VERIFY PILE DESIGN LOAD AND TO DEMONSTRATE INSTALLER'S CONSTRUCTION METHODS. EQUIPMENT, STANDARDS OF WORKMANSHIP, AND TOLERANCES, UNLESS NOTED ON THE DRAWINGS. CONSTRUCT TEST PILE AT LEAST 3 DIAMETERS CLEAR OF PERMANENT PILES.

TESTING SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH ASTM D1143. ASTM D3689 AND ASTM D3966 AND SHALL BE OBSERVED BY A REPRESENTATIVE OF THE OWNER'S TESTING AGENCY. IF OWNER DETERMINES THAT TEST PILE DOES NOT COMPLY WITH REQUIREMENTS, CAST AND TEST ADDITIONAL PILES UNTIL COMPLIANCE IS ASSURED.

INSTALL PILES TO DEPTHS AND ELEVATIONS INDICATED. CAST TOPS OF PILES SQUARE WITH PILE AXIS. PLACE CONTINUOUS CENTER REINFORCING THROUGH THE HOLLOW-STEMMED AUGER PRIOR TO PLACEMENT OF GROUT. USE BAR SPACERS TO CENTER REINFORCING BARS AND PROPERLY POSITION FOR EMBEDMENT IN PILE CAPS.

INSTALL PILES TO THE FOLLOWING TOLERANCES: HORIZONTAL: MAXIMUM 3 INCHES FROM DESIGN LOCATION

MAXIMUM 1 INCH FROM DESIGN TOP ELEVATION MAXIMUM 2 PERCENT FROM PLUMB

THE OWNER'S GEOTECHNICAL CONSULTANT SHALL CONTINUOUSLY INSPECT ALL PILE OPERATIONS. THE PILE CONTRACTOR SHALL COOPERATE WITH THE INSPECTOR IN THE PERFORMANCE OF THE PILING WORK. THE INSPECTOR SHALL IMMEDIATELY NOTIFY THE OWNER, PILE CONTRACTOR AND STRUCTURAL ENGINEER IF ANY PILE IS NOT IN CONFORMANCE WITH THE DESIGN DOCUMENTS. IF THE STRUCTURAL ENGINEER DEEMS THAT MODIFICATIONS OR ADDITIONAL PILES ARE REQUIRED, THE COST OF MODIFYING, REMOVING AND REPLACING PILES THAT ARE NOT IN CONFORMANCE SHALL BE BORNE BY THE PILE CONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER. ABANDONED PILES SHALL BE CUT OFF A MINIMUM OF 12 INCHES BELOW THE BOTTOM OF THE PILE CAP AND WILL NOT BE PAID FOR BY THE OWNER.

PREPARE A MINIMUM OF SIX CONCRETE GROUT SPECIMENS FOR EACH DAY DURING WHICH PILES ARE PLACED. TEST TWO SPECIMENS AT 7 DAYS, TWO AT 28 DAYS, AND HOLD TWO IN RESERVE FOR LATER TESTING IF REQUIRED. CURE AND TEST IN ACCORDANCE WITH ASTM 109.

# SHORING/RE-SHORING

THE SHORING AND/OR RE-SHORING DESIGN FOR CONCRETE FRAME SYSTEMS IS THE RESPONSIBILITY OF THE CONTRACTOR. TEMPORARY SHORING FOR SLABS, BEAMS, AND GIRDERS SHALL BE ADEQUATE TO CARRY THE TOTAL WEIGHT OF THE SLAB-BEAM-GIRDER SYSTEM AND ANY TEMPORARY CONSTRUCTION LOADS TO BE IMPOSED ON THE STRUCTURAL SYSTEM. SHORING FOR A LEVEL SHALL NOT BE REMOVED UNTIL THE CONCRETE AT THAT LEVEL HAS ATTAINED THE SPECIFIED COMPRESSIVE STRENGTH (F'C). REMOVAL OF SHORING AND/OR RESHORING SHALL NOT CAUSE OVERSTRESSING OF ANY STRUCTURAL ELEMENTS.

# CONCRETE SLABS ON GRADE

SLABS ON GRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION (ACI 302.1R).

PLACE CONCRETE IN A MANNER SO AS TO PREVENT SEGREGATION OF THE MIX. DELAY FLOATING AND TROWELING OPERATIONS UNTIL THE CONCRETE HAS LOST SURFACE WATER SHEEN OR ALL FREE WATER. DO NOT SPRINKLE FREE CEMENT ON THE SLAB SURFACE.

PROVIDE CURING OF CONCRETE SLABS IMMEDIATELY AFTER FINISHING USING A SPRAYED ON DISSIPATING-RESIN LIQUID CURING COMPOUND CONFORMING TO ASTM C309, UNLESS NOTED OTHERWISE. ALL SCUFFS OR ABRASIONS TO THE CURING MEMBRANE SHALL BE RECOATED DAILY. OTHER CURING METHODS MAY BE USED WITH APPROVAL BY THE STRUCTURAL ENGINEER.

UNLESS SHOWN OR NOTED OTHERWISE, PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS-ON-GRADE AT A MAXIMUM SPACING OF 36 TIMES THE SLAB THICKNESS. PROVIDE JOINTS AT ALL COLUMN LOCATIONS. LOCATE JOINTS TO ELIMINATE RE-ENTRANT CORNERS AND TO CREATE SQUARE OR RECTANGULAR SECTIONS WITH MAXIMUM LONG SIDE TO SHORT SIDE RATIO OF 1.5 TO 1.

CONTROL JOINTS IN SLABS ON GRADE SHALL NOT RECEIVE JOINT FILLER MATERIAL UNLESS NOTED OTHERWISE.

## STRUCTURAL PRECAST CONCRETE (GENERAL)

SUPPLIER OF STRUCTURAL PRECAST CONCRETE IS RESPONSIBLE FOR THE DESIGN, DETAILING, AND INSTALLATION OF THE PRECAST MEMBERS AND CONNECTIONS. DESIGN AND INSTALL PANELS IN ACCORDANCE WITH ACI 318 AND THE PCI DESIGN HANDBOOK, CURRENT EDITIONS. MANUFACTURE IN ACCORDANCE WITH MANUAL FOR QUALITY CONTROL FOR PLANTS AND PRODUCTION OF STRUCTURAL PRECAST CONCRETE PRODUCTS (PCI MNL 116).

THE PRECAST SUPPLIER SHALL ENGAGE A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS CONSTRUCTED TO PERFORM THE DESIGN.

PRECAST SUPPLIER IS RESPONSIBLE FOR TEMPORARY BRACING, GUYS, TIEDOWNS, DEADMEN, ETC. AS REQUIRED TO SUPPORT

STRUCTURAL PRECAST UNTIL THE STRUCTURAL FRAMING SYSTEM AND DECKING INSTALLATION ARE COMPLETE AND FINAL

CONTRACTOR SHALL DESIGN ALL PRECAST MEMBERS AND ERECTION ASSEMBLIES FOR DESIGN AND TEMPORARY ERECTION FORCES, ERECTION SEQUENCING, GUY STAYING AND SHORING. CONTRACTOR SHALL CONFIRM ALL APPROPRIATE CONNECTIONS ARE COMPLETED AND REQUIRED GROUTING HAS OCCURRED TO ENSURE STABILITY DURING CONSTRUCTION BEFORE ERECTING STRUCTURE VERTICALLY.

EMBEDS AND OTHER STEEL ITEMS TO BE EMBEDDED IN THE PRECAST ARE TO BE PROVIDED AND INSTALLED BY THE PRECASTER,

STRUCTURAL STEEL ITEMS TO BE FIELD WELDED TO EMBEDDED ITEMS IN THE PRECAST ARE TO BE PROVIDED AND INSTALLED BY THE STEEL ERECTOR, UNLESS NOTED OTHERWISE.

EMBEDS AND OTHER ITEMS TO BE EMBEDDED IN CAST-IN-PLACE CONCRETE SHALL BE SUPPLIED BY THE PRECASTER AND INSTALLED BY THE CONCRETE CONTRACTOR, UNLESS NOTED OTHERWISE.

IF THE DETAILS INDICATED ON THESE DRAWINGS NEED TO BE MODIFIED TO ACCOMMODATE THE PRECAST SUPPLIER'S

FABRICATION OR INSTALLATION STANDARDS, THE PRECASTER MUST INFORM THE STRUCTURAL ENGINEER AND ALL AFFECTED FABRICATORS AND CONTRACTORS PRIOR TO FABRICATION OF AFFECTED MATERIALS. MODIFICATIONS REQUESTED BY THE PRECASTER AFTER THE AFFECTED ITEMS ARE FABRICATED SHALL BE SOLELY THE RESPONSIBILITY OF THE PRECASTER (INCLUDING ENGINEERING, MATERIAL AND INSTALLATION) AND SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE PROJECT.

COORDINATE ALL OPENINGS, REVEALS, DRIP EDGES, BLOCKOUTS, INSERTS, ETC. TO BE CAST INTO PRECAST MEMBERS WITH STRUCTURAL, ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS. AS PART OF THE SUBMITTAL PROCESS DORDINATION OF EXACT SIZES IS REQUIRED AND SHALL BE PERFORMED BY THE CONTRACTOR.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST. ALL PRECAST CONCRETE TO HAVE CAST-IN-PLACE CONCRETE WASH PLACED ON IT TO HAVE A RAKED FINISH.

TOOL JOINT AT TOP OF CONCRETE WASH REFLECTED OVER JOINT BETWEEN DOUBLE TEES BELOW AND CAULK TO MATCH. mention and the second second

DESCRIPTION	F'C PSI, MIX	MAX W/C RATIO	AVERAGE ENTRAINED AIR	MAXIMUM SLUMP	MAXIMUM COARSE AGGREGATE SIZE	
COLUMNS, LIGHT WALLS & WALLS	6000 STD	0.38	5.5% +/- 1%	N/A	.75"	
BEAMS, DOUBLE TEES (PRETOPPED), STAIRS & SPANDRELS	6000 CNA	0.38	5.5% +/- 1%	N/A	.75"	
CAST-IN-PLACE TOPPING, WASHES & POUR STRIPS	4000 CNA	0.40	5.5% +/- 1%	N/A	.75"	

- "STD" INDICATES A CONCRETE MIX DESIGN IN ACCORDANCE WITH SPECIFICATION WHICH DOES NOT REQUIRE A SILICA FUME, GGBS/FLY ASH OR CALCIUM NITRITE ADMIXTURE. "CNA" INDICATES A CONCRETE MIX DESIGN IN ACCORDANCE WITH SPECIFICATION WHICH CONTAINS 3 GAL/CYD OF CALCIUM NITRITE CORROSION-INHIBITOR ADMIXTURE.
- MAXIMUM WATER SOLUBLE CHLORIDE ION CONTENT FROM ALL CONCRETE CONSTITUENTS SHALL NOT EXCEED 0.06% OF WEIGHT OF CEMENT FOR ALL PRESTRESSED CONCRETE ELEMENTS, 0.15% OF WEIGHT OF CONCRETE FOR CAST-IN-PLACE TOPPINGS, WASHES & POUR STRIPS AND 0.30% FOR ALL OTHER CONCRETE ELEMENTS.

## LOAD BEARING PRECAST CONCRETE WALL PANELS

LOAD BEARING PRECAST WALL PANELS ARE USED TO SUPPORT GRAVITY AND LATERAL LOADS. PRECAST PANELS ARE TO BE DESIGNED FOR THE REACTIONS AND LOAD INFORMATION INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH THE

### **REINFORCING STEEL**

GOVERNING BUILDING CODE.

REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF

REINFORCING BAR DETAILING, FABRICATING, AND PLACING SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING STANDARDS: ACI 301, ACI 315, ACI 318 AND ACI DETAILING MANUAL (SP66).

CONCRETE PROTECTION SHALL BE PER ACI362.1R, EXCEPT AS NOTED ON DRAWINGS AND SPECIFIED HEREIN. SPECIFIC DRAWINGS AND DETAILS MAY OR MAY NOT INDICATE EPOXY COATING OR UNCOATED REINFORCING. IN AREAS OF DISPUTE, THIS SCHEDULE SHALL GOVERN IN ALL CASES.

<u>DESCRIPTION</u>	COVER	PROTECTION
PILE CAPS	3"	UNCOATED
GRADE BEAMS TOP REINFORCING	2"	UNCOATED
GRADE BEAMS BOTTOM REINFORCING	3"	UNCOATED
GRADE BEAMS SIDE REINFORCING	1.5"	UNCOATED
FOOTINGS	3"	UNCOATED
SLAB-ON-GRADE	2" FROM TOP	EPOXY COATED
WALLS	2"	EPOXY COATED
PRECAST COLUMNS	2"	UNCOATED
PRECAST BEAMS	2"	UNCOATED
PRECAST LIGHT WALLS	1.5"	UNCOATED
PRECAST DOUBLE TEES (PRETOPPED)	2"	UNCOATED
PRECAST WALLS	1.5"	UNCOATED
PRECAST STAIRS	0.75"	UNCOATED
WASHES	1.5"	EPOXY COATED

REINFORCING STEEL SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT UNLESS INDICATED ON THE CONTRACT DOCUMENTS OR APPROVED BY THE STRUCTURAL ENGINEER.

WHERE LAP SPLICE LENGTHS ARE NOT SHOWN OR NOTED, PROVIDE A CLASS "B" LAP.

ALL 90 DEGREE AND 180 DEGREE BENDS SHOWN ON THE DRAWINGS SHALL BE STANDARD HOOKS, UNLESS NOTED OTHERWISE. PROVIDE CORNER BARS OF SAME SIZE AND SPACING AS HORIZONTAL BARS AT CORNERS OF ALL WALLS AND GRADE BEAMS. LAP SPLICE CORNER BARS WITH STRAIGHT BARS.

UNLESS OTHERWISE SHOWN OR NOTED, PROVIDE 2-#5 BARS (ONE EACH FACE) AROUND UNFRAMED OPENINGS IN CONCRETE WALLS AND GRADE BEAMS. PLACE BARS PARALLEL TO THE SIDES OF THE OPENING AND EXTEND 24" BEYOND CORNERS.

# FIBER REINFORCEMENT

FIBER REINFORCEMENT SHALL BE 3/4" LONG, VIRGIN (NON-RECYCLED) NYLON OR POLYPROPYLENE FIBERS. INTRODUCED INTO THE CONCRETE MIX AT THE BATCH PLANT, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. DOSAGE SHALL BE 1.5 POUNDS PER CUBIC YARD OF CONCRETE.

# CONCRETE TESTING

MAKE ONE SET OF TEST CYLINDERS IN ACCORDANCE WITH ASTM C31 FOR EACH DAY'S POUR AND FOR EACH 100 CUBIC YARDS. EACH SET SHALL INCLUDE ONE SPECIMEN TESTED AT 7 DAYS, 2 SPECIMENS TESTED AT 28 DAYS AND ONE SPECIMEN RETAINED IN RESERVE TO BE TESTED AT THE DIRECTION OF THE STRUCTURAL ENGINEER. SPARE CYLINDER MAY BE DISCARDED 90 DAYS AFTER CASTING UNLESS DIRECTED OTHERWISE BY THE STRUCTURAL ENGINEER. THIS SET OF TEST CYLINDERS SHALL BE PROTECTED AGAINST FREEZING. WHEN THE AMBIENT TEMPERATURE IS EXPECTED TO FALL BELOW 40 DEGREES DURING THE COURSE OF A CONCRETE POUR OR SUBSEQUENT CURING PROCESS, AN ADDITIONAL SET OF CONCRETE TEST CYLINDERS SHALL BE MADE AND TESTED. THESE CYLINDERS SHALL BE STORED IMMEDIATELY ADJACENT TO, AND CURED UNDER THE SAME CONDITIONS AS THE BUILDING CONCRETE. SPECIAL CURING BOXES ARE NOT PERMITTED FOR THESE TEST CYLINDERS.

FORWARD COPIES OF TEST RESULTS TO THE ARCHITECT, STRUCTURAL ENGINEER, READY-MIX SUPPLIER AND CONTRACTOR WITHIN 24 HOURS AFTER TESTING.

CONCRETE MASONRY HAS BEEN DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES (ACI 530).

CONCRETE MASONRY SHALL CONSIST OF HOLLOW UNITS CONFORMING TO THE REQUIREMENTS OF ASTM C90, WITH A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 1900 PSI. CONCRETE MASONRY ASSEMBLAGES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'M) OF

MORTAR SHALL BE TYPE S PROPORTIONED IN ACCORDANCE WITH ASTM C270.

GROUT FOR REINFORCED MASONRY SHALL BE PROPORTIONED IN ACCORDANCE WITH ASTM C476. COARSE AND FINE AGGREGATES SHALL CONFORM TO ASTM C404. USE COARSE GROUT FOR ALL GROUTING EXCEPT HIGH-LIFT POURS DEFINED BY ACI 530-05 TABLE 1.16.1, WHERE

PROVIDE 9-GAUGE GALVANIZED STEEL WIRE JOINT REINFORCEMENT IN ALL MASONRY CONSTRUCTION. REINFORCEMENT SHALL BE CONTINUOUS AND BE LAPPED EIGHT INCHES AT SPLICES. CUT REINFORCEMENT AT ALL CONTROL AND EXPANSION JOINTS. SPACE REINFORCEMENT AT 8" ON CENTER FOR PARAPETS AND BELOW GROUND FLOOR ELEVATION. ELSEWHERE SPACE REINFORCEMENT AT 16

BEAMS AND LINTELS SHALL BEAR A MINIMUM OF 8 INCHES ONTO SUPPORTING MASONRY, UNLESS NOTED OTHERWISE. BEARING FOR ALL BEAMS, LINTELS, JOISTS, ETC. SHALL BE GROUTED SOLID A MINIMUM OF ONE COURSE (8 INCHES) BELOW BEARING ELEVATION, UNLESS

### EXPANSION ANCHORS

EXPANSION ANCHORS SHALL BE CARBON STEEL ANCHORS AS MANUFACTURED BY HILTI FASTENING SYSTEMS OR AN EQUIVALENT SUBSTITUTE APPROVED BY THE STRUCTURAL ENGINEER AND SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S

EXPANSION ANCHORS SHALL NOT BE INSTALLED IN CONCRETE UNTIL IT HAS ATTAINED ITS SPECIFIED MINIMUM 28 DAY COMPRESSIVE

# ADHESIVE ANCHORS

ADHESIVE ANCHORS SHALL BE HILTI "HIT HY200" FOR SOLID SUBSTRATE AND HILTI "HIT HY70" FOR HOLLOW SUBSTRATE OR AN EQUIVALENT SUBSTITUTE APPROVED BY THE STRUCTURAL ENGINEER, UNLESS NOTED OTHERWISE ON PLANS. ANCHORS SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS BY INSTALLERS TRAINED BY THE MANUFACTURER'S

MINIMUM EMBEDMENT DEPTH SHALL BE 8 BOLT DIAMETERS UNLESS NOTED OTHERWISE.

GROUT SHALL BE A NON-METALLIC, SHRINKAGE RESISTANT (WHEN TESTED IN ACCORDANCE WITH THE LATEST EDITION OF ASTM C827 OR CRD-C621), PREMIXED, NON-CORROSIVE, NON-STAINING PRODUCT CONTAINING PORTLAND CEMENT, SILICA SANDS, SHRINKAGE COMPENSATING AGENTS AND FLUIDITY IMPROVING COMPOUNDS. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'C) OF 5,000

SELF-EXPANDING STRIP WATER STOPS SHALL BE SINKO FLEX UNLESS NOTED OTHERWISE. INSTALL IN ACCORDANCE WITH MANUFACTURER'S

# WRITTEN INSTRUCTIONS.

UNLESS NOTED OTHERWISE, APPLY MASTIC TO A COATING THICKNESS OF 18 MILS. PROVIDE FULL COVERAGE OVER ITEMS INDICATED TO RECEIVE COATING.

MASTIC COATING FOR PROTECTION OF INDICATED ITEMS SHALL BE BITUMASTIC 50 COAL TAR MASTIC BY CARBOLINE OR EQUIVALENT

SUBSTITUTE APPROVED BY THE STRUCTURAL ENGINEER. INSTALL AT LOCATIONS INDICATED ON DRAWINGS.

STRUCTURAL STEEL DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO THE ANSI/AISC 360 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, LATEST EDITION WITH AMENDMENTS, AND THE AISC 303 CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, LATEST EDITION WITH AMENDMENTS.

STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992, 50 KSI. STRUCTURAL STEEL PLATES AND ROLLED SHAPES OTHER THAN WIDE-FLANGE SHAPES SHALL CONFORM TO ASTM A36, UNLESS NOTED

STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500, GRADE B.

STEEL STUDS SHALL CONFORM TO ASTM A108.

STRUCTURAL PIPE SHALL CONFORM TO ASTM A53, GRADE B. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 36, UNLESS NOTED OTHERWISE.

BOLTED CONNECTIONS SHALL CONFORM TO THE SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, APPROVED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS OF THE ENGINEERING FOUNDATION. BOLTED CONNECTIONS FOR

SHALL BE TIGHTENED TO THE SNUG TIGHT CONDITION, EXCEPT BOLTED CONNECTIONS IN BRACE ELEMENTS ARE TO BE FULLY PRETENSIONED WITH CLASS A FAYING SURFACES. WELDING PROCEDURES SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE

STRUCTURAL STEEL MEMBERS SHALL BE MADE WITH 3/4" DIAMETER A325 BOLTS, UNLESS NOTED OTHERWISE. BOLTED CONNECTIONS

FOR STEEL ANSI/AWS D1.1. WELDED CONNECTIONS USING ASTM A992 STEEL AS A BASE METAL SHALL BE MADE WITH E70XX LOW HYDROGEN ELECTRODES. UNLESS OTHERWISE SHOWN OR NOTED ON THE DRAWINGS, OTHER WELDED CONNECTIONS MAY BE MADE WITH STANDARD E70XX ELECTRODES.

STRUCTURAL STEEL THAT RECEIVES FINISH PAINT SHALL BE SHOP-PRIMED WITH A RUST-INHIBITING PRIMER. UNLESS NOTED OTHERWISE ON THE DRAWINGS. CONTRACTOR SHALL VERIFY PRIMER IS COMPATIBLE WITH FINISH COAT SYSTEM SPECIFIED BY THE ARCHITECT. COORDINATE FINISH PAINTING REQUIREMENTS WITH THE ARCHITECT.

STRUCTURAL STEEL THAT IS NOT EXPOSED IN THE FINISHED CONSTRUCTION AND DOES NOT RECEIVE FINISH PAINT SHALL NOT BE SHOP-

PRIMED, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

STRUCTURAL STEEL NOTED TO BE GALVANIZED SHALL BE HOT-DIP GALVANIZED IN CONFORMANCE WITH ASTM A123.

DO NOT PAINT OR GALVANIZE THE FOLLOWING SURFACES: 1. SURFACES TO BE WELDED. 2. SURFACES TO RECEIVE BOLTED SLIP-CRITICAL CONNECTIONS.

3. SURFACES TO RECEIVE SHEAR STUD CONNECTIONS.

4. SURFACES TO RECEIVE SPRAYED-ON FIREPROOFING.

WITH THE MECHANICAL AND PLUMBING CONTRACTORS.

ALL ABRASIONS TO GALVANIZED SURFACES OR SURFACES TO RECEIVE AN ARCHITECTURAL FINISH COAT SHALL BE TOUCHED-UP AFTER ERECTION IS COMPLETE. FOR PAINTED STEEL, USE A PRIMER EQUIVALENT TO THE SHOP PAINT. FOR GALVANIZED STEEL, USE A ZINC-RICH COLD-GALVANIZING PAINT.

DESIGN CONNECTIONS NOT SHOWN IN ACCORDANCE WITH THE ASD SPECIFICATION AND MANUAL OF STEEL CONSTRUCTION. UNLESS NOTED OTHERWISE ON THE DRAWINGS, DESIGN BEAM CONNECTIONS NOT SHOWN, TO SUPPORT A MINIMUM OF A 10 KIP SHEAR REACTION.

PROVIDE NO LESS THAN 2 BOLTS IN ANY SINGLE LINE OF BOLTS, UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS. PROVIDE L4X4X1/4 FRAMED OPENINGS FOR ALL ROOF PENETRATIONS 12 INCHES OR LARGER ALONG ANY SIDE, UNLESS LARGER FRAMING IS INDICATED. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR PENETRATIONS. COORDINATE FRAMED OPENING SIZES AND LOCATIONS

# GALVANIZE ALL EXPOSED STEEI

CONTRACTOR SHALL COORDINATE ELEVATOR PITS, SHAFTS, SLAB OPENINGS, FRAMING LOCATIONS, GUIDE RAIL SUPPORTS, DIVIDER BEAMS, HOIST BEAMS AND SUMP PITS WITH ELEVATOR SUPPLIER PRIOR TO CONSTRUCTION AS REQUIRED FOR PROPER INSTALLATION AND OPERATION.

COORDINATE ANY REQUIRED STRUCTURAL MODIFICATIONS WITH THE STRUCTURAL ENGINEER PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY STRUCTURAL ELEMENTS.

# STEEL ROOF DECK

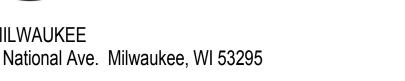
PROVIDE AND ERECT STEEL DECK IN ACCORDANCE WITH THE LATEST EDITION OF THE STEEL DECK INSTITUTE'S SPECIFICATIONS AND CODE OF STANDARD PRACTICE. DECK MANUFACTURER SHALL PROVIDE ALL ROOF DECK ACCESSORIES. INCLUDING CLOSURES. SUPPLEMENTARY FRAMING. AND SUMP

PANS. WHETHER OR NOT SUCH ITEMS ARE DETAILED ON THE CONTRACT DOCUMENTS. FASTEN ROOF DECK TO STEEL SUPPORTS AS INDICATED ON THE DRAWINGS. PERFORM WELDING IN ACCORDANCE WITH ANSI/AWS D1.3.

ROOF DECK SHALL BE INSTALLED IN A MINIMUM THREE SPAN CONDITION. PROVIDE STEEL ROOF DECK WITH FINISH AS INDICATED ON THE DRAWINGS



U.S. Departmen of Veterans Affairs







ARCHITECT/ENGINEERS: PROJECT LEAD Architect, Structural Engineer, Civil Engineer

SUSTAINABLE ARCHITECTURE + ENGINEERING

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**Drawing Title** 

Approved for Design Concept: **FACILITY MANAGEMENT DIVISION MANAGER** 

**CLEMENT J ZABLOCKI VAMC** Checked By: | Drawn By 1 DEC 2015

PARKING STRUCTURE

Project Title

**BID SET** 

Drawing Number WJT

**Project Number** 

**Building Number** 

#152

14.1020.02

695-324



OFFICE OF

**FACILITIES** 

**MANAGEMENT** 



VA Project Number

**AMENDMENT** 

29 APR 2016 Date

VAMC MILWAUKEE 5000 W. National Ave. Milwaukee, WI 53295